

ELECTROPHORETIC ANALYSIS SYSTEM HAVING IN-SITU CALIBRATION

ABSTRACT

An electrophoretic system having a plurality of separation lanes is provided with an automatic calibration feature in which each lane is separately calibrated. For each lane, the calibration coefficients map a spectrum of received channel intensities onto values reflective of the relative likelihood of each of a plurality of dyes being present. Individual peaks, reflective of the influence of a single dye, are isolated from among the various sets of detected light intensity spectra, and these can be used to both detect the number of dye components present, and also to establish exemplary vectors for the calibration coefficients which may then be clustered and further processed to arrive at a calibration matrix for the system. The system of the present invention thus permits one to use different dye sets to tag DNA nucleotides in samples which migrate in separate lanes, and also allows for in-situ calibration with new, previously unused dye sets.